

DETAILED DESCRIPTION OF THE INVENTION:

Referring to FIGS. 4 to 9, the present invention relates to a press-contacting conductive terminal device. The conductive terminal device comprises a non-conductive enclosure 10, at least one base 20, at least one contact member 30, and at least one resilient member 40. The non-conductive enclosure 10 defines at least one cylindrically shaped through hole 11. The through hole 11 extends from a front end through a rear end of the non-conductive enclosure 10. The through hole 11 has a first opening 111 at the front end of the non-conductive enclosure 10 and a second opening 112 at the rear end of the non-conductive enclosure 10. An inner diameter of the first opening 111 is less than that of the through hole 11. A stop portion 113 is thereby defined by the first opening 111 shrinking abruptly to prevent the rear end 32 of the contact member 30 from moving out of the through hole 11. The stop portion 113 is integrally formed with the non-conductive enclosure 10 at the front end of the non-conductive enclosure 10, so as to easily control the size of the aperture diameter of the first opening 111.

The contact member 30 is made of a metal material with good conductivity, and is received in the through hole 11. The contact member 30 is configured to be hollow or solid. The contact member 30 consists of a front end portion 31 whose outside diameter is less than the inside diameter of the first opening 111 and a rear end portion 32 whose outside diameter is larger than the inside diameter of the first opening 111 while less than the inside diameter of the through hole 11. This will allow the contact member 30 to freely move within the through hole 11 of the non-conductive enclosure 10. The rear end portion 32 of the contact member 30 is disposed in the through hole 11, and the front end portion 31 of the contact member 30 extends through the first opening 111 and beyond the front end of the non-conductive enclosure 10.

The resilient member 40 is a compressive spring, made of a conductive material, and is disposed in the through hole 11. One end of the resilient member 40 abuts against the inner portion of the contact member 30 and the other end of the resilient member 40 abuts against the contact portion 22 of the base 20. An electrical connection is made

CLAIMS:

1. A press-contacting conductive terminal device, comprising:
 - a non-conductive enclosure (10) defining a cylindrically shaped through hole (11), a front end and a rear end of the through hole having a first opening (111) and a second opening (112), respectively;
 - at least one contact member (30) having a front end portion (31) and a rear end portion (32), an outside diameter of the rear end portion being slightly larger than an outside diameter of the front portion, the rear end portion being slideably received in the through hole;
 - at least one resilient member (40), being received in the through hole (11), one end thereof abutting against the rear end portion (32) of the contact member (30) and causing the front end portion (31) of the contact member to extend through the first opening (111) and beyond a front end of the non-conductive enclosure (10), a stop portion (113) placed on the first opening (111) of the non conductive enclosure to prevent the rear end (32) of the contact member from moving out of the through hole (11);
 - at least one base (20), including two side wings (21) and a contact portion (22), the side wings extending together from the contact portion (22) and having a planar surface a portion of which is tangent to an inner surface of the cylindrically shaped through hole (11), the contact portion (22) completely covering the second opening (112) on the rear end of the through hole (11) when the base is inserted into the rear end of the non conductive enclosure;
 - the rear end (32) of the contact member (30) located between the two side wings (21) of the base with an outer wall of the rear end (32) of the contact member (30) sliding in continuous electrical contact with an inner wall of the two side wings (21).
2. A press-contacting conductive terminal device as claimed in claim 1, wherein the stop portion (113) is integrally formed with the non-conductive enclosure.
3. A press-contacting conductive terminal device as claimed in claim 2 wherein the stop portion (113) is an inner diameter of the first opening (111) of the non conductive housing (10) being smaller than the outer diameter of the rear portion (32) of the contact member (30) while the outer diameter of the front portion (31) of the contact member is smaller than the inner

diameter of the first opening.

4. A press-contacting conductive terminal device as claimed in claim 1, wherein the non-conductive enclosure (10) defines two slots (114), at two sides of the through hole, extending along an axial direction of the through hole, and adjacent to the second opening (112), each side wing (21) of the base (20) corresponding to and insertable into a respective inner slot (114).

5. A press-contacting conductive terminal device as claimed in claim 4, wherein two side wings (21) of the base (20) respectively form a plurality of interfering portions (23) to be interferingly engaged within the slots (114).

6. A press-contacting conductive terminal device as claimed in claim 1, wherein the two side wings (21) extend from the first opening (111) into the through hole a length at least as long as the rear end (32) of the contact member (30) slides within the through hole (11).

7. A press-contacting conductive terminal device as claimed in claim 1, wherein the resilient member (40) is a spring.